

HTML

Module 2

Ryan Collins

HTML?



HTML (HyperText Markup Language) is the basic building block of the web

An HTML document is just a collection of elements



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Department of Computer Science

I retired on January 1, 2022. I am no longer taking any new students or interns at any level.

Update June 2022: I am a Democratic candidate for the New Hampshire House of Representatives, running in Lebanon Ward 3 (Grafton County District 15).

Ph.D., [Massachusetts Institute of Technology](#), 1992.

- [Papers](#)
- [FG](#)
- [Other software](#)
- [Vita](#)

I taught my final course in Fall 2019. You can view a [video of my last lecture](#), which was not about computer science.

Khan Academy now carries [algorithms tutorials](#) for which [Devin Balkcom](#) and I produced content.

Are you looking for solutions to exercises and problems in *Introduction to Algorithms*?

If you are, then see the [frequently asked question and answer](#) below.

If you request solutions from me, I will not respond.

From July 2004 through June 2008, I was the director of the [Dartmouth Institute for Writing and Rhetoric](#).

I occasionally taught a graduate Computer Science course on how to write papers and how to give talks. I publish a [list of usage rules](#) that I required my students to observe.

In 2015, PRI's "The World" ran a [story on mentoring women in computer science](#) in which a couple of my students and I were interviewed.

I was interviewed for the *Command Line Heroes* podcast "[Learning the BASICS](#)."

You can also hear me spout off in "[Philosophical Trials #7](#)."

I talked about writing *Introduction to Algorithms* in [an episode of "Frank Stajano Explains"](#).

And an [interview with a Brazilian vlogger](#).

Graduate Student Alumni

- [Alex Colvin](#), Ph.D. 1999
- [Peter C. Johnson](#)
- [Priya Natarajan](#), Ph.D. 2011 [[Photo](#) of Priya and me at 2012 Dartmouth graduation]
- Geeta Chaudhry Petrovic, Ph.D. 2004 [[Photo](#) of Geeta and me at 2004 Dartmouth graduation]
- [Elena Riccio Strange](#) (formerly Elena Riccio Davidson), Ph.D. 2006
- [Len Wisniewski](#), Ph.D. 1996
- [Melissa Hirsch Chawla](#), M.S. 1997
- [Michael Ringenburg](#), M.S. 2001
- Georgi Vassilev, M.S. 1994

DEVTOOLS

To look at the elements of a HTML document you can use the,

DevTools in your browser

To open the DevTools, you can right click and select “inspect”

Or click the 3 dots in the top right, select more tools, then developer tools

RYDEV

Software Engineer

Teaching programming, development, React / Next.js



Website Design & Development

A screenshot of a browser's developer tools, specifically the element inspector. The left panel shows a tree view of the HTML document structure. The right panel displays the CSS styles for the selected element, with a preview of how it looks in the browser. The code editor at the bottom shows the corresponding CSS file with its rules.

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <div id="__next">
      <div>
        <div class="min-h-screen">
          <div class="nav nav-glass h-10 sticky">...</div>
          <main class="container mx-auto px-5 py-24">
            <div class="container px-6 mx-auto">
              <div class="items-center lg:flex">...</div>
            == $0
          </div>
        </div>
        <div class="mx-auto">...</div>
        <div class="mt-24">...</div>
        <div class="mb-24">...</div>
        <div>...</div>
      </main>
    </div>
  </div>
</body>
</html>
```

Styles Computed Layout Event Listeners >

Filter :hov .cls + ↻

```
element.style { }
.items-center { align-items: center; }
*, :after, :before { --tw-border-spacing-x: 0;
--tw-border-spacing-y: 0;
--tw-translate-x: 0;
--tw-translate-y: 0;
--tw-rotate: 0;
--tw-skew-x: 0;
--tw-skew-y: 0;
--tw-scale-x: 1;
--tw-scale-y: 1;
--tw-pan-x: ; }
```

1453d3aeaf389b36.css:3

1453d3aeaf389b36.css:3

EDITOR

To write your own HTML document, you need a special text editor called an IDE (Integrated Development Environment), like VSCode

The image shows the official Visual Studio Code website and a screenshot of the VS Code interface.

Visual Studio Code Website:

- Header: Visual Studio Code, Docs, Updates, Blog, API, Extensions, FAQ, Learn, Download (blue button).
- Middle section:
 - Text: Version 1.69 is now available! Read about the new features and fixes from June.
 - Section title: Code editing. Redefined.
 - Text: Free. Built on open source. Runs everywhere.
 - Download button: Download Mac Universal Stable Build.
 - Text: Web, Insiders edition, or other platforms.
 - Text: By using VS Code, you agree to its license and privacy statement.

VS Code Interface Screenshot:

- Left sidebar: EXTENSIONS: MARKETPLACE. Shows a list of installed extensions with their names, versions, sizes, and ratings.
 - Python 2019.6.24221 54.9M ★ 4.5
 - GitLens — Git supercharged 9.8.5 23.1M ★ 5
 - C/C++ 0.24.0 23M ★ 3.5
 - ESLint 1.9.0 21.9M ★ 4.5
 - Debugger for C# 4.11.6 20.6M ★ 4
 - Language Support for Java 0.47.0 18.6M ★ 4.5
 - vscode-icons 8.8.0 17.2M ★ 5
 - Vetur 0.21.1 17M ★ 4.5
- Code Editor: Shows code snippets for blog-post.js, index.js, and utils.js. The blog-post.js snippet is expanded, showing imports and a function definition.

```
src > components > JS blog-post.js > <function> > blogPost
1 import { graphql } from "gatsby"
2 import React from "react"
3 import Image from "gatsby-image"
4
5 export default ({ data }) => {
6   const blogPost = data.cms.blogPost
```

```
[e] data
[e] dateFormat
[e] debug
[...] debugger
[...] decodeURI
[...] decodeURIComponent
[...] default
[...] defaultStatus
[...] delete
[...] departFocus
[...] devicePixelRatio
[...] dispatchEvent
19 }
20
21 export const query = graphql`
```
- Terminal: Shows command-line output for compilation.

```
info i [wdm]: Compiling...
[DONE] Compiled successfully in 70ms
4:05:11 PM
info i [wdm]:
info i [wdm]: Compiled successfully.
```

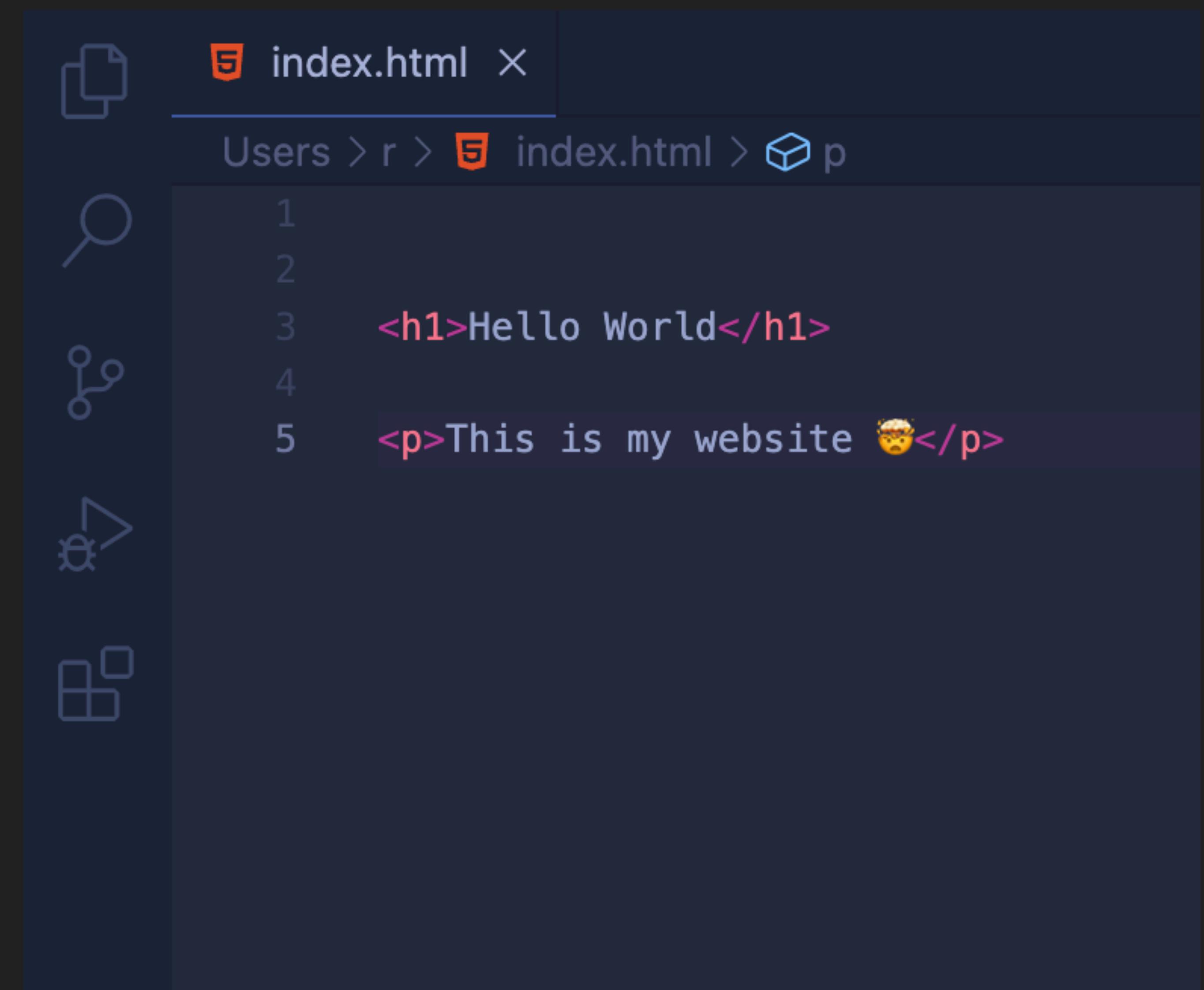
Bottom icons:

- IntelliSense
- Run and Debug
- Built-in Git
- Extensions

ELEMENTS

An HTML document is a collection of elements,

an element is a opening and closing tag, with content in the middle



```
index.html
Users > r > index.html > p
1
2
3 <h1>Hello World</h1>
4
5 <p>This is my website 😠</p>
```

ATTRIBUTES

1

Elements can have attributes to change their behaviour

2

```
3 <input type="|" />
```

- button
- checkbox
- color
- date
- datetime
- datetime-local
- email
- file
- hidden
- image
- month
- number

Go to this link now to checkout some attributes
[https://developer.mozilla.org/en-US/docs/Web/HTML/
Attributes](https://developer.mozilla.org/en-US/docs/Web/HTML/Attributes)

ANCHOR

The anchor tag allows one page to navigate to another page based on it's URL



[Check out this website!](#)

```
index.html X
Users > r > index.html > a
1
2
3 <a href="https://example.com">Check out this website!</a>
```

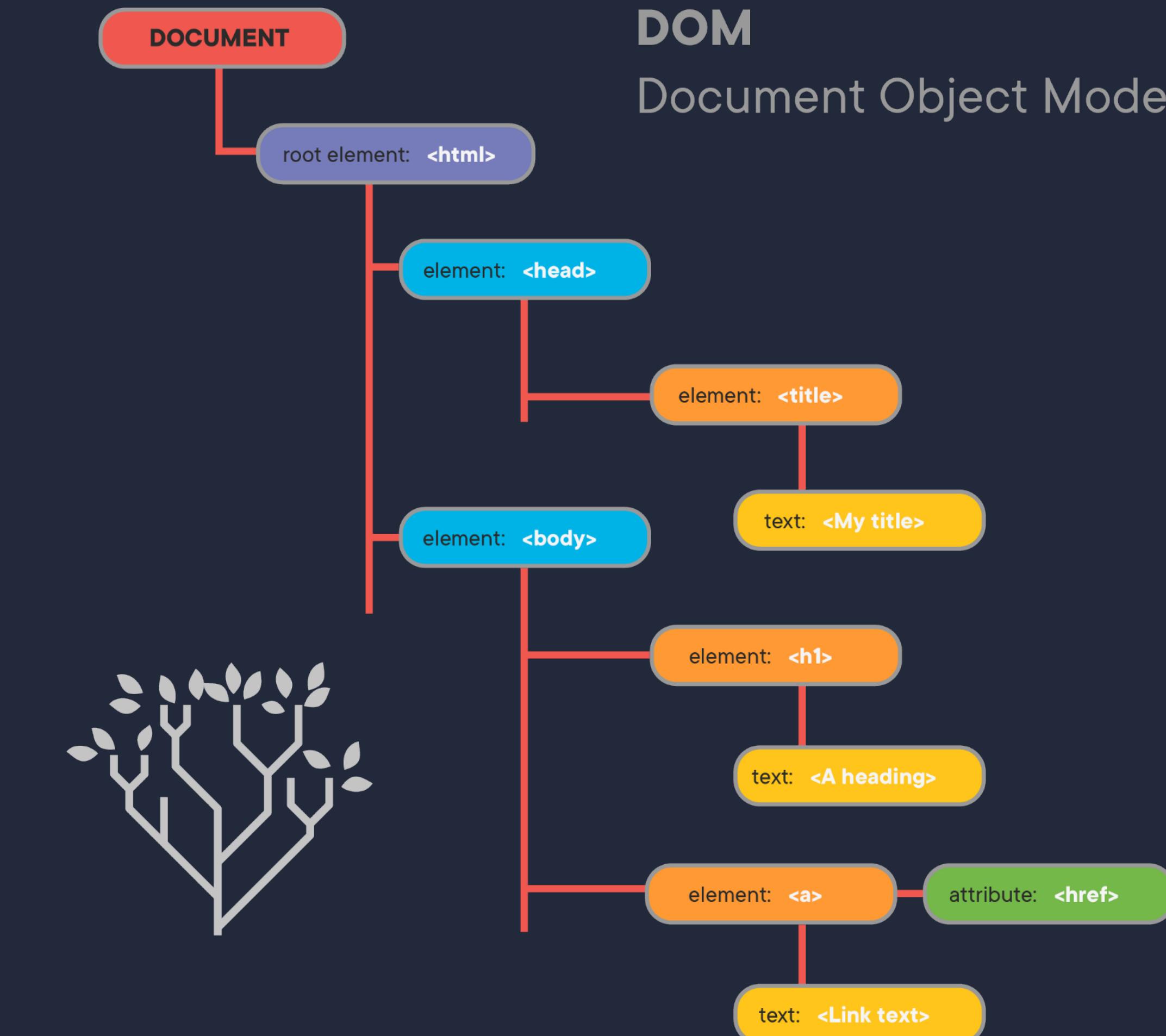
WE ARE
VERY EXCITE!
memegenerator.net

Users > r > 5 index.html > 📁 html

```
1  
2  
3  <html>  
4  
5  
6  </html>
```

DOCUMENT OBJECT MODEL

Elements are nestled together in a hierarchy to form the document object model (DOM)



```
1
2  <html>
3  <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width,
7          initial-scale=1.0">
8      <title>Document</title>
9  </head>
10 <body>
11 </body>
12 </html>
```

HEAD

The document is split into several parts, The head contains invisible metadata and a title

```
1
2  <html>
3    <head>
4      <meta charset="UTF-8">
5      <meta http-equiv="X-UA-Compatible" content="IE=edge">
6      <meta name="viewport" content="width=device-width,
7          initial-scale=1.0">
8      <title>Document</title>
9    </head>
10   <body>
11     <main>
12       <h1>comIT Web development</h1>
13       <p>This is my website</p>
14     </main>
15   </body>
16 </html>
```

The body contains the main content that
the user can see 🌐

BODY

```
Users > r > index.html > html > body > main > div
/           <title>Document</title>
8           </head>
9           <body>
10          <main>
11          <h1>comIT Web development</h1>
12          <p>This is my website</p>
13
14          <div>More content...</div>
15          <div>More content...</div>
16          <div>More content...</div>
17          <div>More content...</div>
18      </main>
19  </body>
20  </html>
```

DIV

The most common element you will see in a web page, is the div element,

The div (content division element) is a generic container that divides content through a page

REVIEW

HTML

“Hypertext” refers to links that connect webpages together, connections within websites, or between websites on the internet

- Links are a fundamental aspect of the web
- HTML uses “markup” to annotate text, images, and other content for display in a web browser
- HTML markup includes special “elements”

`<head>`, `<title>`, `<body>`, `<header>`, `<footer>`, `<article>`, `<section>`, `<p>`, `<div>`,
``, ``, `<aside>`, `<nav>`, ``, ``, ``

And many others.

TAGS

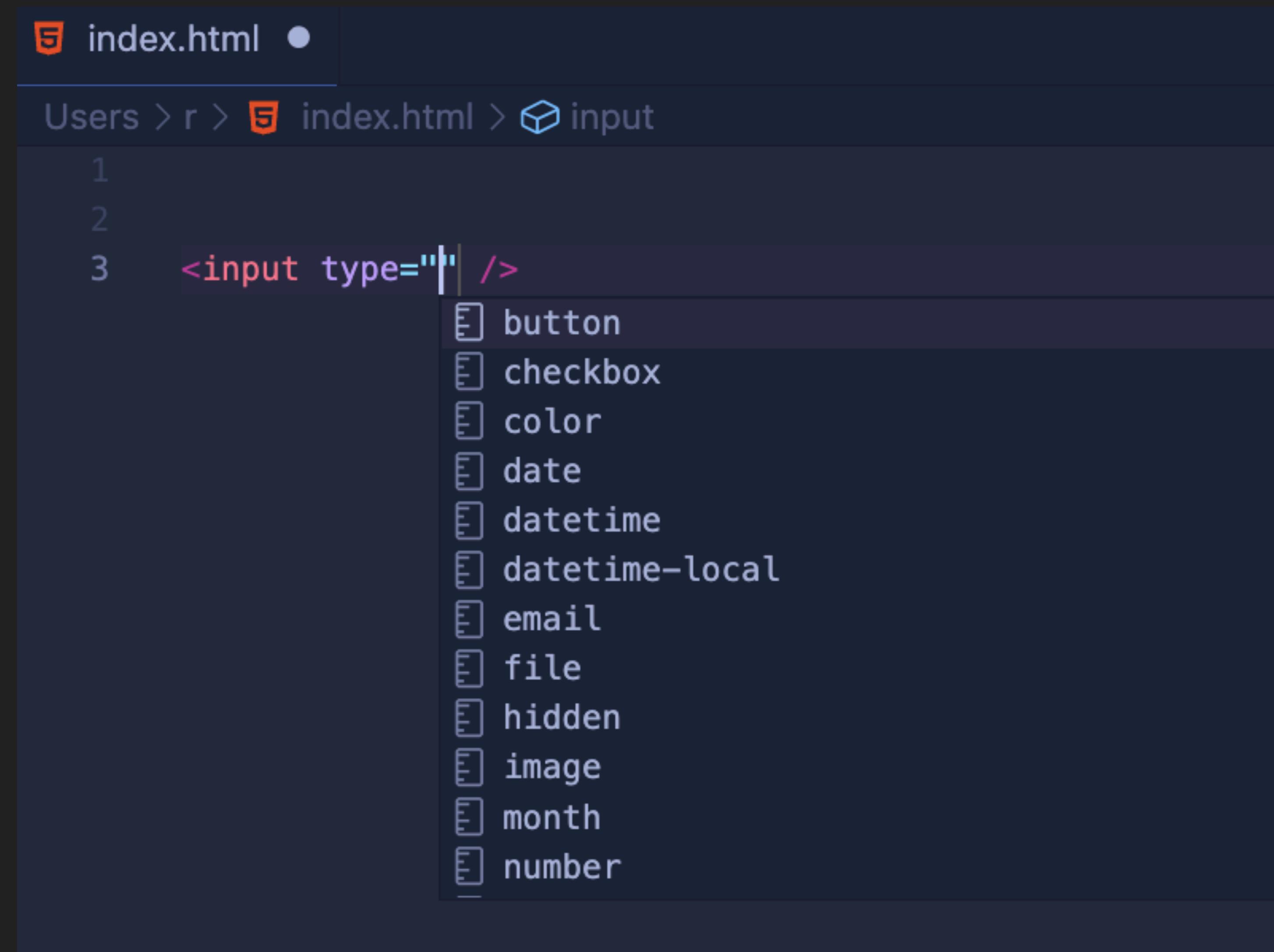
The name of an HTML element is the name used in angle brackets such as <p> for paragraph.

Note that the end tag's name is preceded by a slash character, </p>



ATTRIBUTES

Elements in HTML have attributes; these are additional values that configure the elements or, adjust their behaviour in various ways to meet the criteria the users want.



The screenshot shows a code editor interface with a dark theme. At the top, there's a file tab labeled "index.html". Below the tabs, a breadcrumb navigation bar shows the file path: "Users > r > index.html > input". The main code area displays the following lines of code:

```
1  
2  
3 <input type="|" />
```

The cursor is positioned at the end of the word "type" in the third line. A dropdown menu is open, listing various HTML input types, each preceded by a small icon:

- button
- checkbox
- color
- date
- datetime
- datetime-local
- email
- file
- hidden
- image
- month
- number

OTHER ATTRIBUTES

The lang attribute inside the opening <html> tag set the language for the page. Also screen readers will know how to properly pronounce the text.

```
<html lang="en">
```

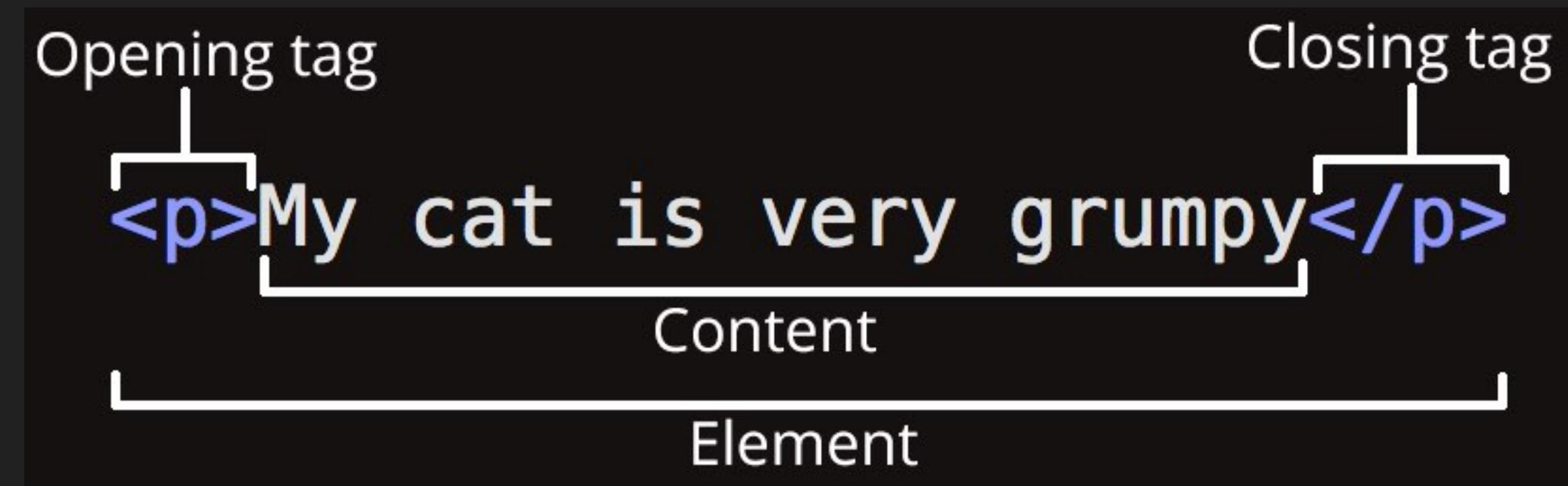
Doctype, the first line in your HTML code should be the doctype declaration, this tells the browser what version the HTML page is written in.

```
<!DOCTYPE html>
```

If you forget to add this line of code at the top, some of the HTML 5 tags like, <article>, <footer>, and <header> may not be supported by the browser.

Anatomy of an HTML element

1. The opening tag: The name of the element `<p>`, wrapped in opening and closing angle brackets, where the element begins. `<p>`
2. The closing tag: This is the same as the opening tag, but with a forward slash before the element name, this is where the element ends. `</p>`
3. The content: content of the element is just text, in this case.
4. The element: the opening tag and closing tag and content together comprises the element.



Regular text would be simply,
“My cat is very grumpy”

In HTML, to make it stand out by itself, we need to specify its a paragraph,

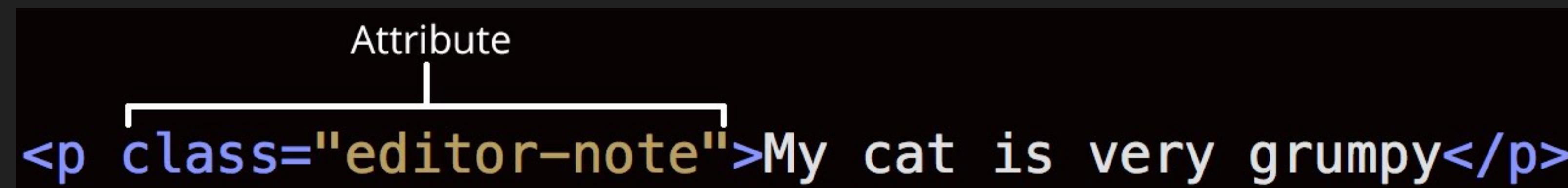
`<p>My cat is very grumpy</p>`

ELEMENT ATTRIBUTES

“class” is the attribute name and “editor-note” is the attribute value. The class attribute allows a non-unique identifier that can be used as a target, with style or others. The extra information about the element is something you don’t want to appear in the content, and is hidden from the user

The attribute should always contain,

1. A space between it and the element name
2. The attribute name followed by an equal sign =
3. The attribute value wrapped by opening and closing quotation marks

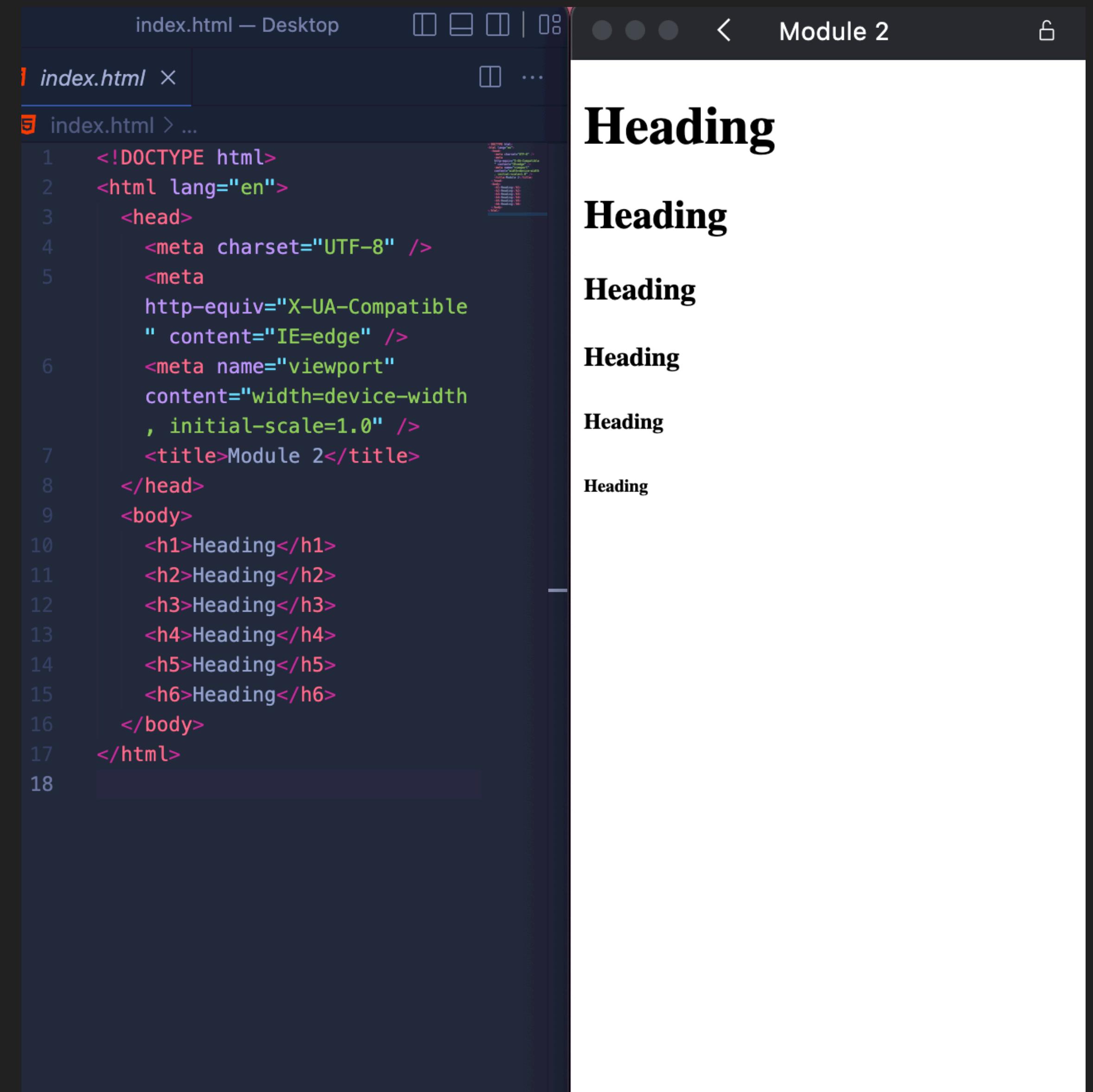


HEADER

The h1 element represents the most important heading in a page

The h2 element represents the second most important element, there are a total of six heading elements

```
<h1>most important heading</h1>
<h2>second most important heading</h2>
<h3>third most important heading</h3>
<h4>fourth most important heading</h4>
<h5>fifth most important heading</h5>
<h6>the least important heading</h6>
```



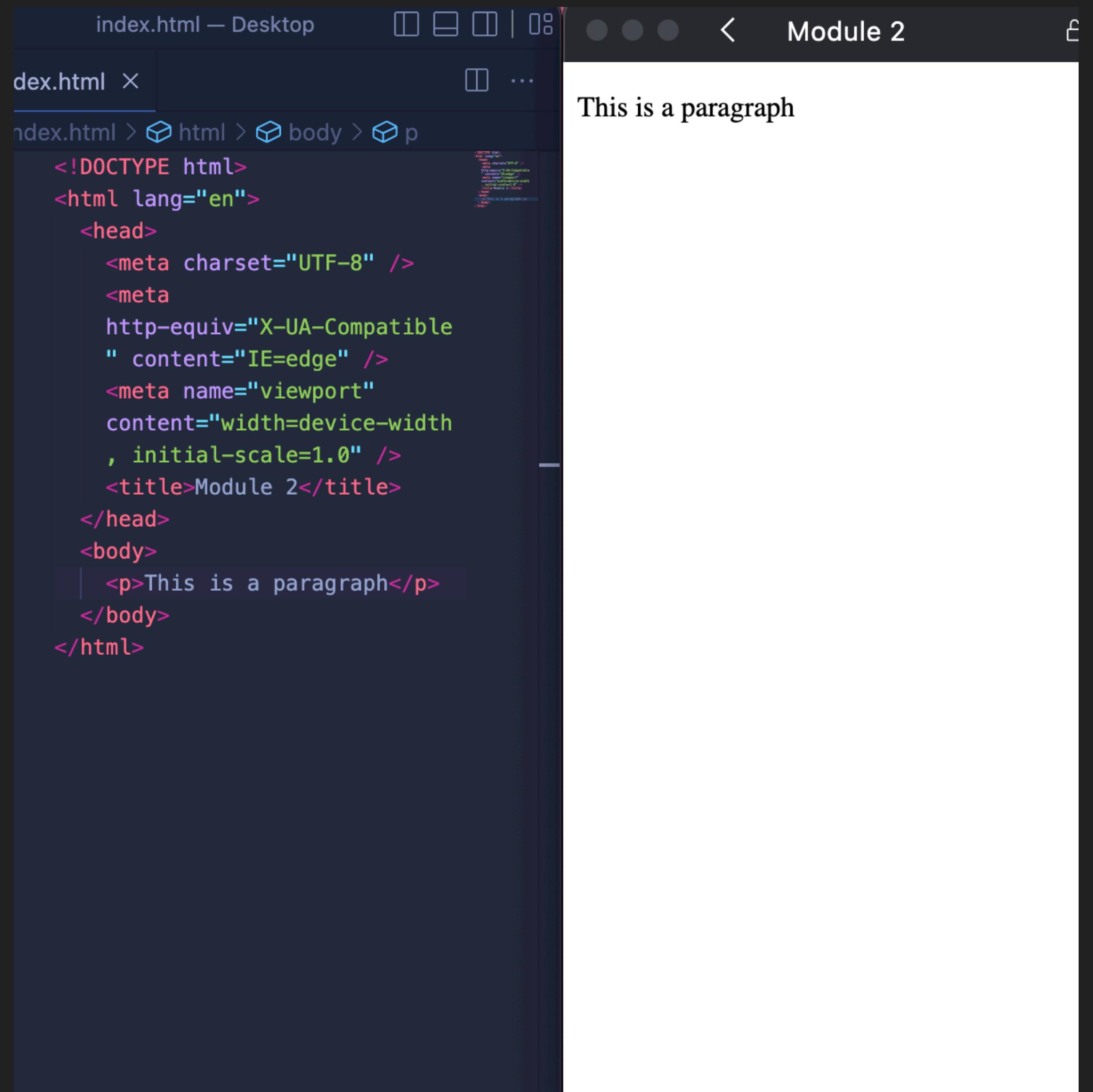
The screenshot shows a browser window titled "index.html — Desktop". The tab bar also includes "Module 2". The main content area displays six "Heading" elements, each consisting of bold black text on a white background. The headings are arranged vertically from top to bottom: "Heading", "Heading", "Heading", "Heading", "Heading", and "Heading". To the left of the browser window, the actual HTML code for "index.html" is visible in a code editor. The code includes standard HTML tags like DOCTYPE, html, head, and body, along with meta tags for charset and viewport, and a title tag for "Module 2". The heading elements are defined within the body section.

```
index.html
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="UTF-8" />
5     <meta
6       http-equiv="X-UA-Compatible"
7         content="IE=edge" />
8     <meta name="viewport"
9       content="width=device-width,
10      initial-scale=1.0" />
11   <title>Module 2</title>
12 </head>
13 <body>
14   <h1>Heading</h1>
15   <h2>Heading</h2>
16   <h3>Heading</h3>
17   <h4>Heading</h4>
18   <h5>Heading</h5>
19   <h6>Heading</h6>
20 </body>
21 </html>
```

PARAGRAPH

Paragraphs represent the paragraphs on a webpage

For more info, you can checkout the
<https://devdocs.io/html/element/p>



The screenshot shows a code editor interface with two tabs: "dex.html" and "index.html". The "dex.html" tab is active, displaying the following HTML code:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta
      http-equiv="X-UA-Compatible"
      content="IE=edge" />
    <meta name="viewport"
      content="width=device-width
      , initial-scale=1.0" />
    <title>Module 2</title>
  </head>
  <body>
    <p>This is a paragraph</p>
  </body>
</html>
```

The "index.html" tab is visible in the background. On the right side of the editor, there is a preview window titled "Module 2" showing the rendered HTML content: "This is a paragraph".

COMMENTS

HTML comments can help you keep your code organized, while writing.

Comments won't be rendered on the page

<! - - comment - - >

The screenshot shows a code editor window titled "index.html — Desktop". The file content is as follows:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta
      http-equiv="X-UA-Compatible"
      content="IE=edge" />
    <meta name="viewport"
      content="width=device-width
      , initial-scale=1.0" />
    <title>Module 2</title>
  </head>
  <body>
    <!-- This is a comment -->
    <p>This is a paragraph</p>
  </body>
</html>
```

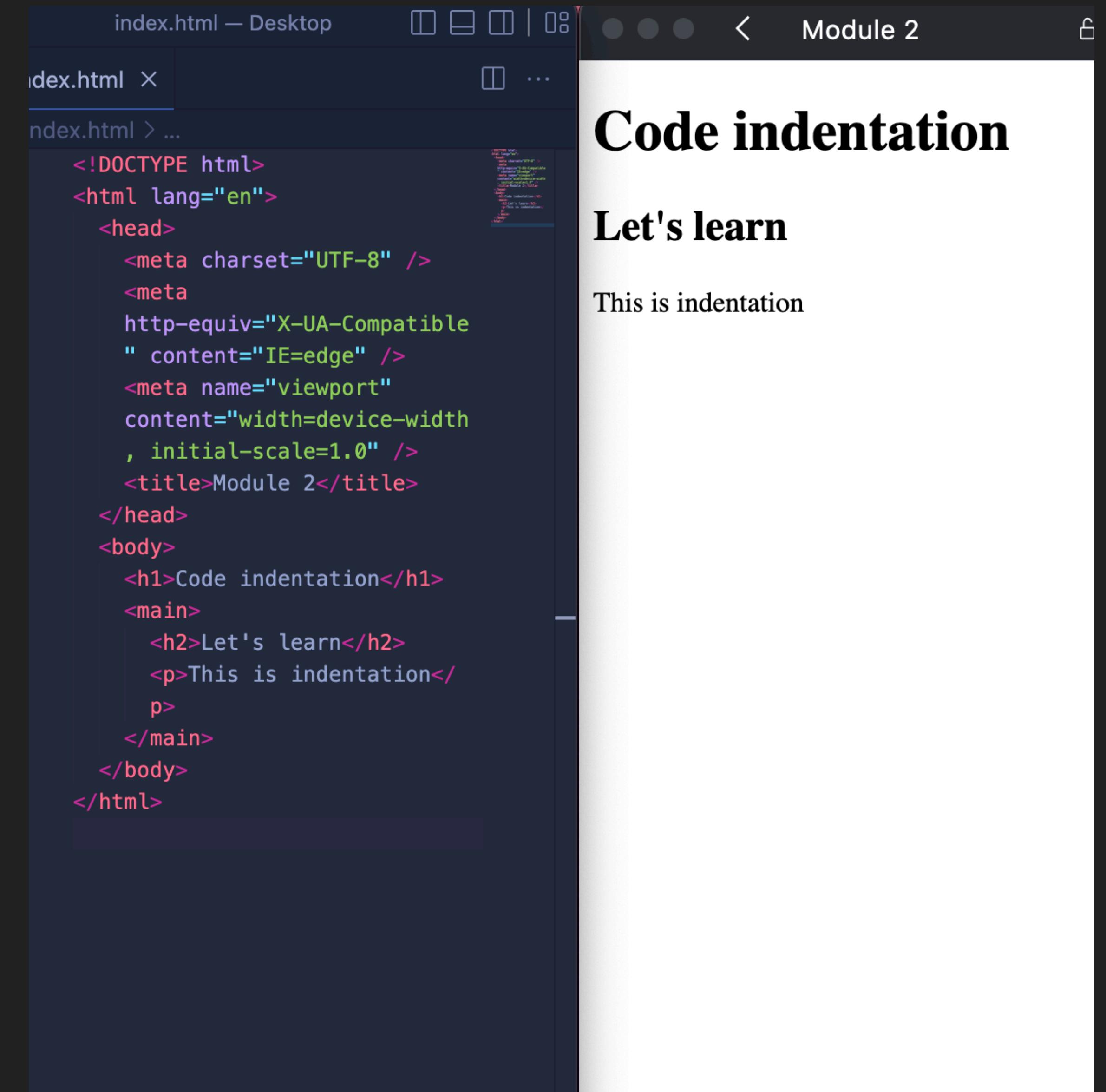
A line of text from the "body" section of the code, specifically the comment "This is a comment", is highlighted with a thin white line pointing towards it from the text above. To the right of the code editor is a browser window titled "Module 2" showing the rendered HTML output: "This is a paragraph".

INDENTATION

When you have HTML elements nested inside other HTML elements, it's best to use indentation,

nested elements are known as children of their parent element

To indent your code, you move the code two spaces to the right.



The screenshot shows a code editor window titled "index.html — Desktop". The file content is as follows:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta
      http-equiv="X-UA-Compatible"
      content="IE=edge" />
    <meta name="viewport"
      content="width=device-width
      , initial-scale=1.0" />
    <title>Module 2</title>
  </head>
  <body>
    <h1>Code indentation</h1>
    <main>
      <h2>Let's learn</h2>
      <p>This is indentation</p>
    </main>
  </body>
</html>
```

The code is indented using two spaces for each level of nesting. The nested elements (`<head>`, `<body>`, and `<main>`) are indented to the right of their parent elements.

Code indentation

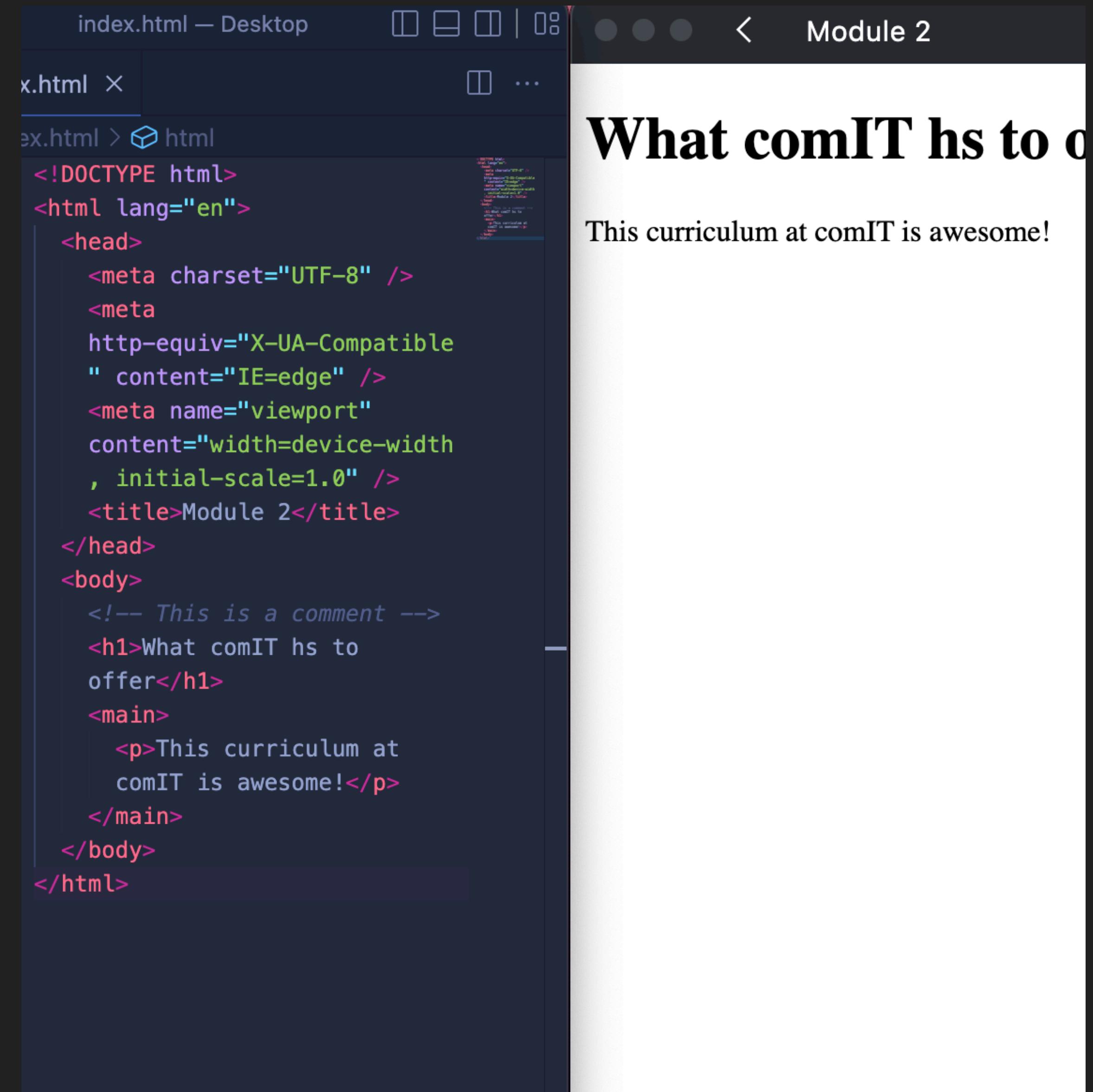
Let's learn

This is indentation

MAIN

The main element is used to group all the main content of the webpage together

```
<main>  
    // content  
</main>
```



A screenshot of a code editor window titled "index.html – Desktop". The code editor shows an HTML file with the following structure:

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Module 2</title>
  </head>
  <body>
    <!-- This is a comment -->
    <h1>What comIT hs to offer</h1>
    <main>
      <p>This curriculum at comIT is awesome!</p>
    </main>
  </body>
</html>
```

The "main" element is highlighted in purple. To the right of the code editor, there is a white sidebar with the title "What comIT hs to offer" and the text "This curriculum at comIT is awesome!". At the top of the slide, there is a navigation bar with "Module 2" and other icons.

LINKS & ANCHOR TAGS

- Links are very important, they make the web a web! To add a link, we simply add a `<a>` element, “a” being short form for “anchor”
- To make text in your paragraph into a link, we add a anchor tag

```
<a>My cool website</a>
```

- But we also have to add the actual link with a “`href`” attribute

```
<a href="...">My cool website</a>
```

- Then we add the value, in this case the web address you want to link to:

```
<a href="https://mycoolwebsite.com">My cool website</a>
```

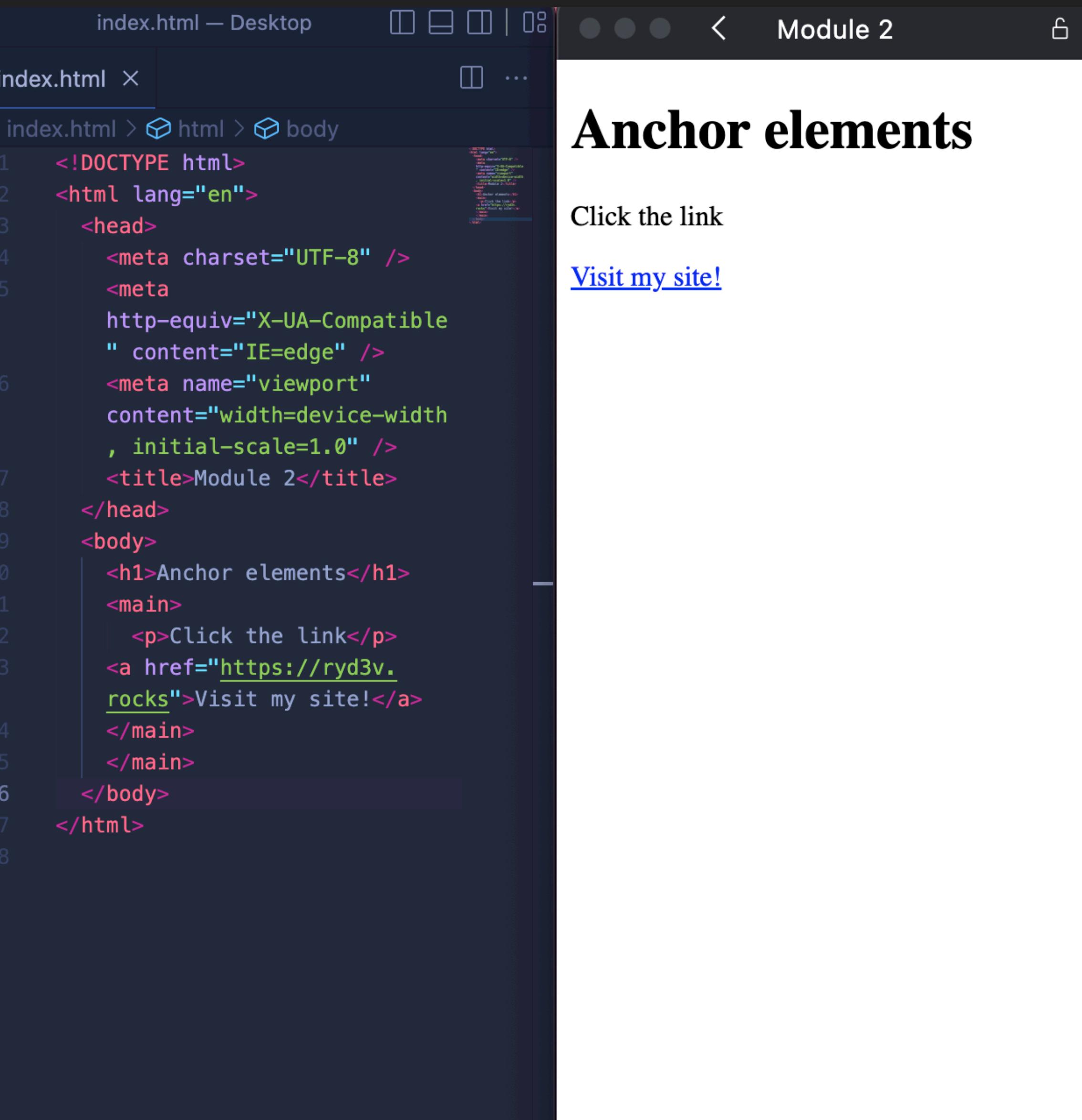
ANCHOR

An anchor element represents a link on a web page.

Here is the basic syntax:

```
<a href="link that you want to visit">Text goes here</a>
```

You use the href to tell the hyperlink where to go.



The screenshot shows a code editor window titled "index.html — Desktop". The code is as follows:

```
index.html > html > body
1  <!DOCTYPE html>
2  <html lang="en">
3      <head>
4          <meta charset="UTF-8" />
5          <meta
6              http-equiv="X-UA-Compatible"
7                  content="IE=edge" />
8          <meta name="viewport"
9              content="width=device-width
10                 , initial-scale=1.0" />
11          <title>Module 2</title>
12      </head>
13      <body>
14          <h1>Anchor elements</h1>
15          <main>
16              <p>Click the link</p>
17              <a href="https://ryd3v.
18                  rocks">Visit my site!</a>
19          </main>
20      </body>
21  </html>
```

The anchor element at line 17 is highlighted with a purple background. To the right of the code editor, there is a sidebar with the title "Anchor elements" and two text blocks: "Click the link" and "Visit my site!".

NESTING

You can put elements inside other elements, nesting.

- If we wanted to emphasize the cat is really grumpy, we could wrap the word “very” in a `` element

```
<p>My cat is <strong>very</strong> grumpy.</p>
```

- Some elements have no content, these are empty elements

```

```

This element contains two attributes, but no closing tag “``”

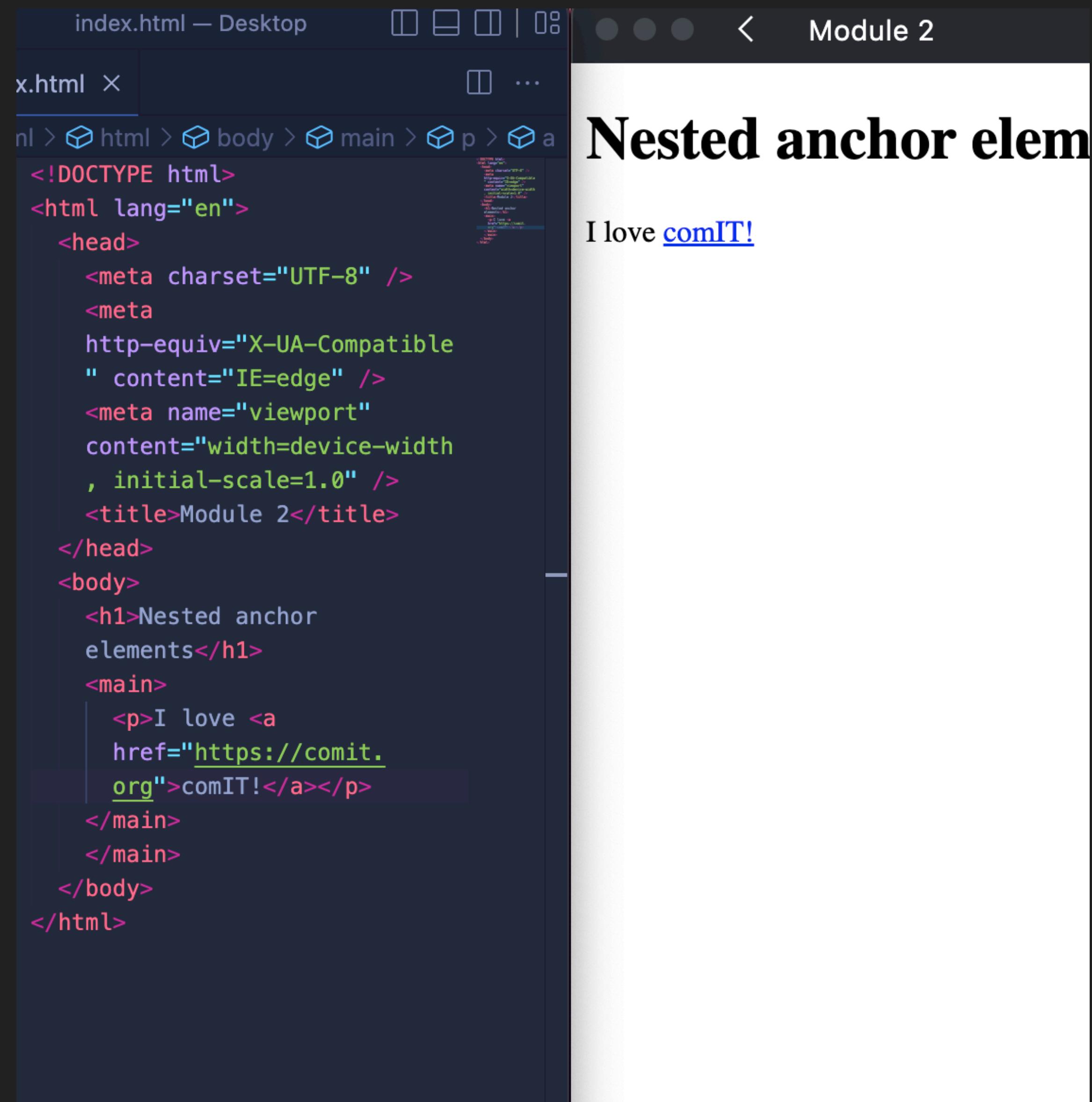
This is because the image element doesn’t wrap content to affect it



NESTING ANCHORS

If you want to include links inside your paragraphs, you can nest anchor tags inside the paragraph tags.

```
<p>I love <a href="https://  
www.comit.org">comIT</a></p>
```



The screenshot shows a code editor interface with a dark theme. The file being edited is named "x.html". The code structure is as follows:

```
index.html — Desktop
x.html ×
nl > html > body > main > p > a
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0" />
    <title>Module 2</title>
  </head>
  <body>
    <h1>Nested anchor elements</h1>
    <main>
      <p>I love <a href="https://comit.org">comIT!</a></p>
    </main>
    </main>
  </body>
</html>
```

The code editor highlights the nested anchor element within the paragraph tag. The preview pane on the right shows the rendered HTML output: "I love comIT!" where "comIT!" is a blue hyperlink.

Nested anchor elem

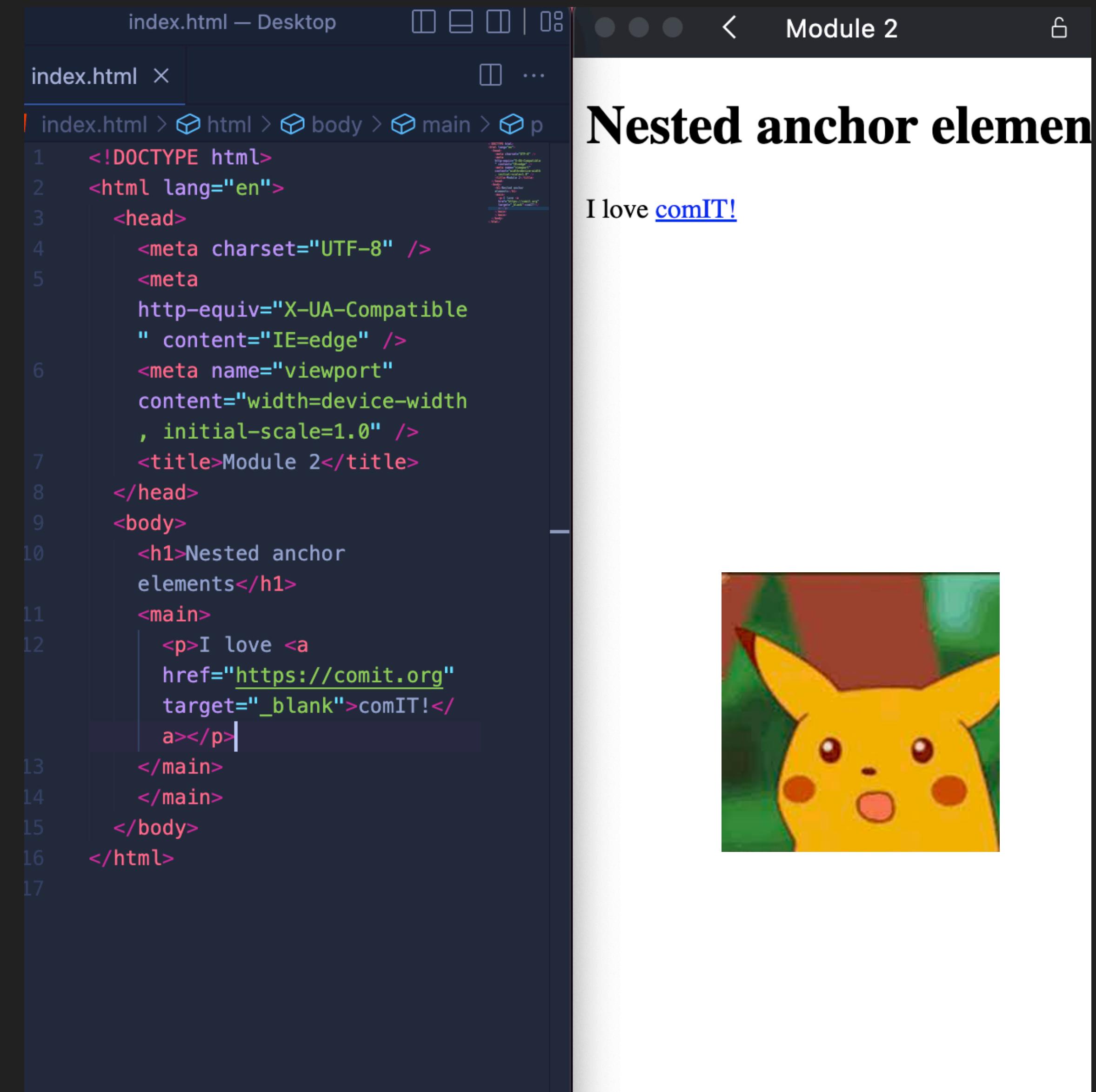
I love [comIT!](https://comit.org)

TARGET

You can use the target="_blank" attribute inside the opening anchor tag,

```
<a href="https://comit.org"  
target="_blank">comIT</a>
```

When the user clicks on the link, a new browser tab will open automatically!



```
index.html — Desktop  
index.html X  
index.html > html > body > main > p  
1  <!DOCTYPE html>  
2  <html lang="en">  
3  <head>  
4    <meta charset="UTF-8" />  
5    <meta  
6      http-equiv="X-UA-Compatible"  
7      " content="IE=edge" />  
8    <meta name="viewport"  
9      content="width=device-width  
10     , initial-scale=1.0" />  
11    <title>Module 2</title>  
12  </head>  
13  <body>  
14    <h1>Nested anchor  
15      elements</h1>  
16    <main>  
17      <p>I love <a  
18        href="https://comit.org"  
19        target="_blank">comIT!</a></p>  
20    </main>  
21  </body>  
22 </html>
```

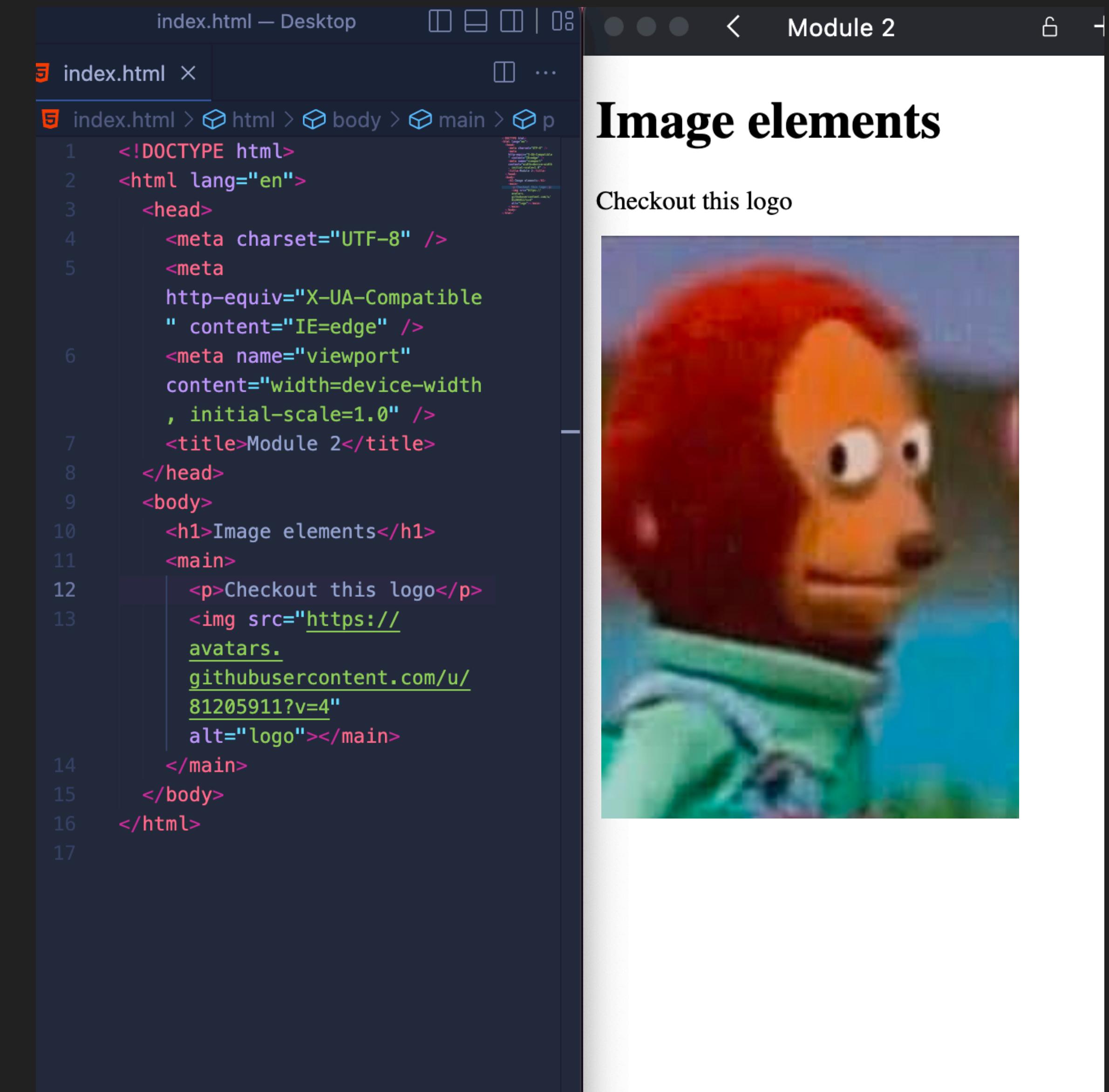


IMAGES

 elements are used to add images to web pages.

The src attribute represents the source of the image

And the alt represents a descriptive text for the image



```
index.html — Desktop
```

```
index.html ×
```

```
index.html > html > body > main > p
```

```
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <meta charset="UTF-8" />
5      <meta
6        http-equiv="X-UA-Compatible"
7        content="IE=edge" />
8      <meta name="viewport"
9        content="width=device-width
10       , initial-scale=1.0" />
11      <title>Module 2</title>
12    </head>
13    <body>
14      <h1>Image elements</h1>
15      <main>
16        <p>Checkout this logo</p>
17        </main>
22      </main>
23    </body>
24  </html>
```

Image elements

Checkout this logo



STRONG

Strong elements are sections of text that represent a sense of urgency, or great importance!

```
<p>I <strong>love</strong> coffee!</p>
```

The image shows a code editor window titled "index.html — Desktop" and a browser preview window titled "Module 2". The code editor displays the following HTML code:

```
<html>
  <head>
    <title>Strong elements</title>
  </head>
  <body>
    <h1>Strong elements</h1>
    <main>
      <section>
        <h1>Wake up</h1>
        <p>Drink coffee</p>
        <p>I <strong>Love</strong> coffee!</p>
      </section>
    </main>
    </main>
  </body>
</html>
```

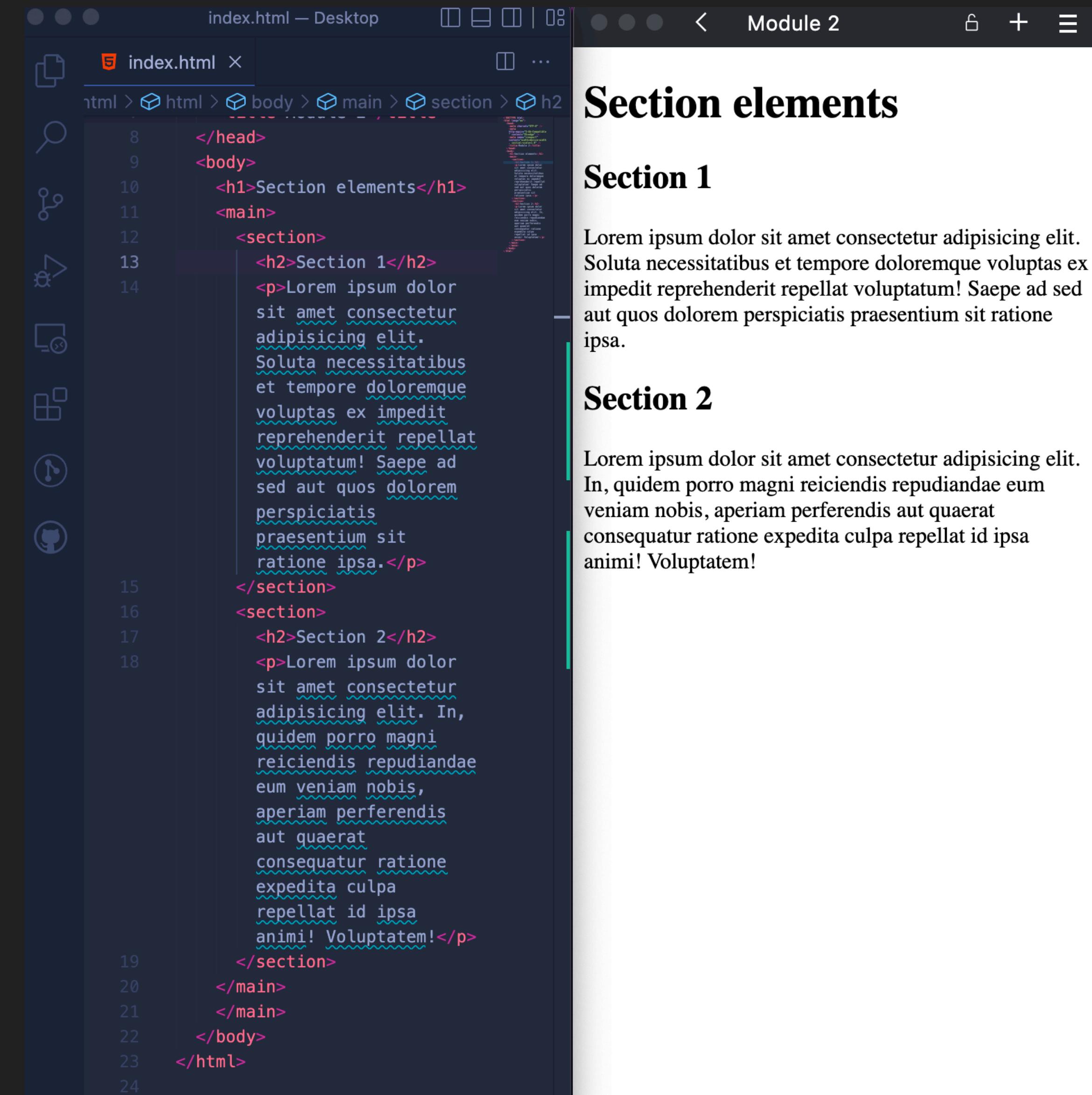
The browser preview window shows the rendered HTML with the text "Strong elements" in large bold letters, "Wake up" in bold, and the phrase "I Love coffee!" where "Love" is bolded.

SECTION

Section elements are used to group sections of content together

You can find even more information about section elements here,

<https://devdocs.io/html/element/section>



The image shows a code editor window titled "index.html — Desktop". The code is structured as follows:

```
index.html
html > html > body > main > section > h2
8   </head>
9   <body>
10  <h1>Section elements</h1>
11  <main>
12    <section>
13      <h2>Section 1</h2>
14      <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Soluta necessitatibus et tempore doloremque voluptas ex impedit reprehenderit repellat voluptatum! Saepe ad sed aut quos dolorem perspiciatis praesentium sit ratione ipsa.</p>
15    </section>
16    <section>
17      <h2>Section 2</h2>
18      <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. In, quidem porro magni reiciendis repudiandae eum veniam nobis, aperiam perferendis aut quaerat consequatur ratione expedita culpa repellat id ipsa animi! Voluptatem!</p>
19    </section>
20  </main>
21  </main>
22  </body>
23  </html>
```

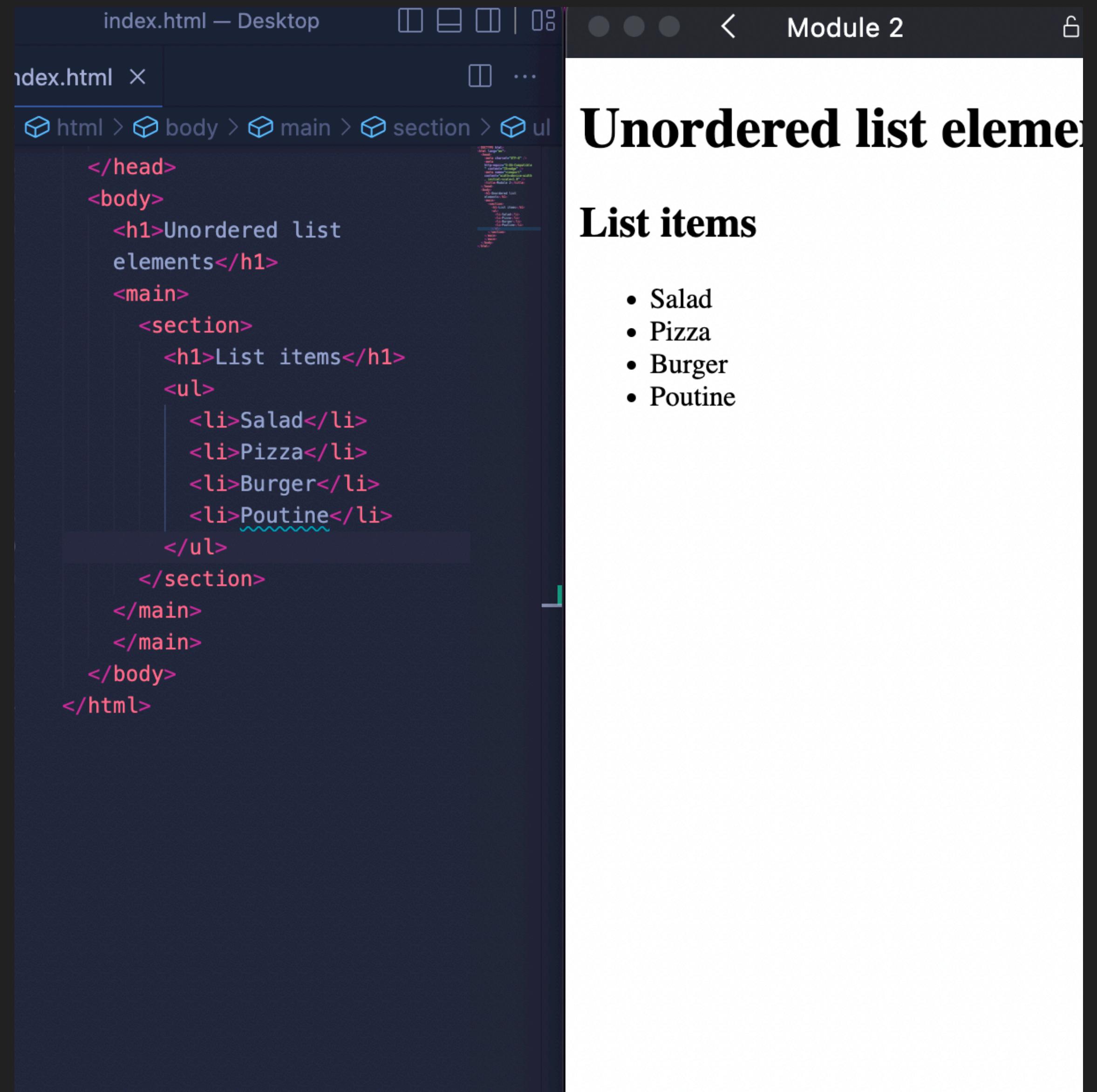
The code editor has a sidebar with various icons. The right panel contains two sections of placeholder text (Lorem ipsum) under the headings "Section 1" and "Section 2".

LISTS

The ul element is used to display a list of items, in no particular order.

And the li element represents the individual list item.

```
<ul>  
  <li>list item</li>  
  <li>list item</li>  
</ul>
```



The screenshot shows a browser window with the title "index.html — Desktop". The address bar also says "index.html". The page content is displayed in a dark-themed code editor. At the top, there's a navigation bar with icons for back, forward, and search. The main content area shows the following HTML code:

```
<head>  
<body>  
  <h1>Unordered list elements</h1>  
  <main>  
    <section>  
      <h1>List items</h1>  
      <ul>  
        <li>Salad</li>  
        <li>Pizza</li>  
        <li>Burger</li>  
        <li>Poutine</li>  
      </ul>  
    </section>  
  </main>  
  </main>  
</body>  
</html>
```

To the right of the code editor, the browser's rendering of the page is shown. It features a large heading "Unordered list elements" and a sub-section with the heading "List items". Below this, a bulleted list contains the following items:

- Salad
- Pizza
- Burger
- Poutine

ORDERED LISTS

The `ol` element is used to display a list of items in a particular order, say for example a recipe or main course

```
<ol>  
    <li>list item 1</li>  
    <li>list item 2</li>  
</ol>
```

The `` element still represents the individual list items

The screenshot shows the DOM structure of an HTML file named `index.html`. The code is as follows:

```
index.html — Desktop  
index.html x  
html > body > main > section > ol > li  
8   </head>  
9   <body>  
10  <h1>Ordered list elements</h1>  
11  <main>  
12    <section>  
13      <h1>Main course</h1>  
14      <ol>  
15          <li>Salad</li>  
16          <li>Baked potatoes</li>  
17          <li>Sirloin</li>  
18          <li>Carrots</li>  
19      </ol>  
20    </section>  
21  </main>  
22  </main>  
23  </body>  
24  </html>  
25
```

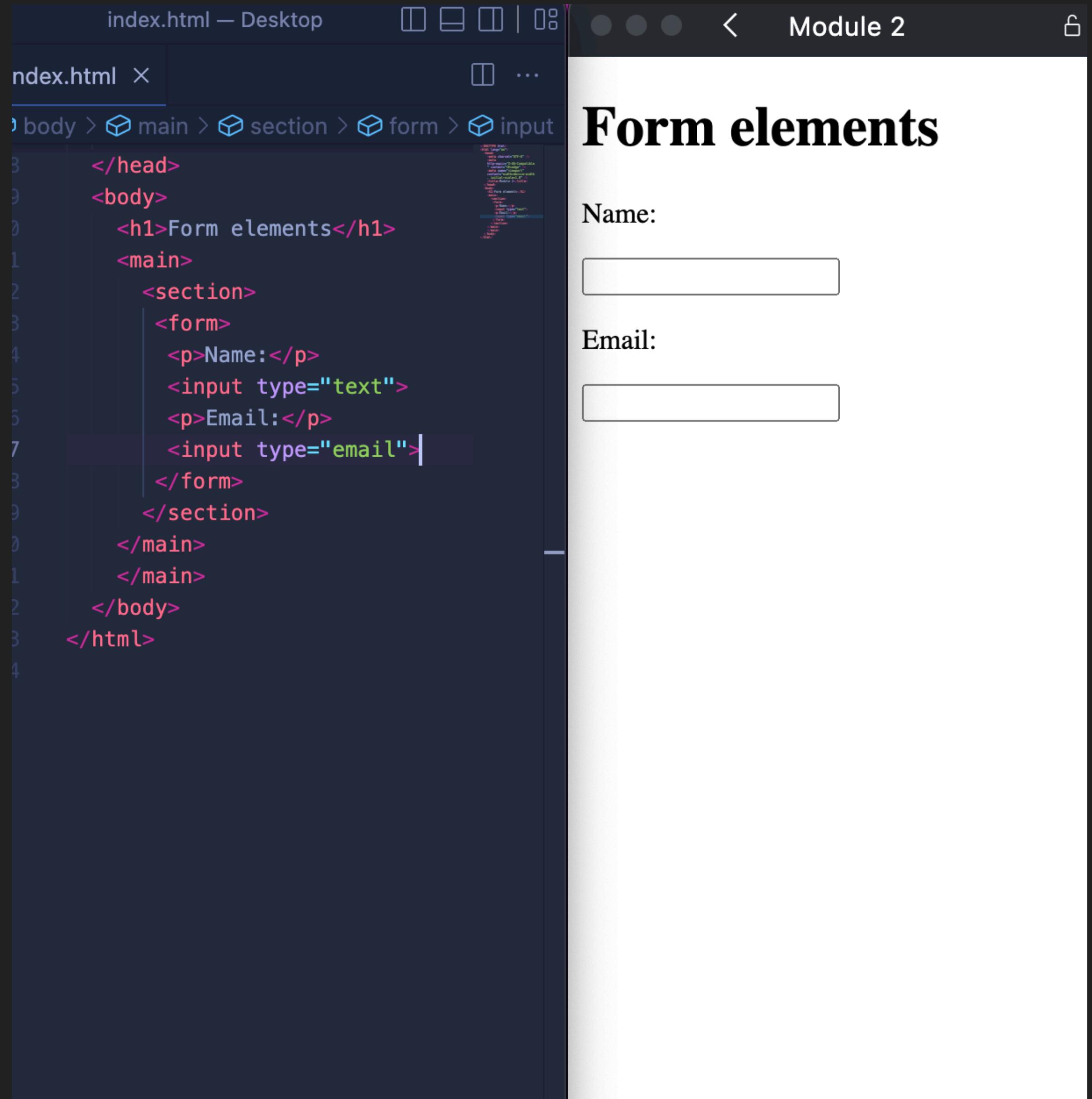
The browser window shows the heading "Ordered list elements" and a section titled "Main course" containing an ordered list with four items: "1. Salad", "2. Baked potatoes", "3. Sirloin", and "4. Carrots".

FORM

Form elements are used to collect data from a user, like names and email address for example in a contact form

```
<form action="where data is sent">  
    <! - - inputs go here - ->  
</form>
```

Inside the form tags, there are inputs for user data



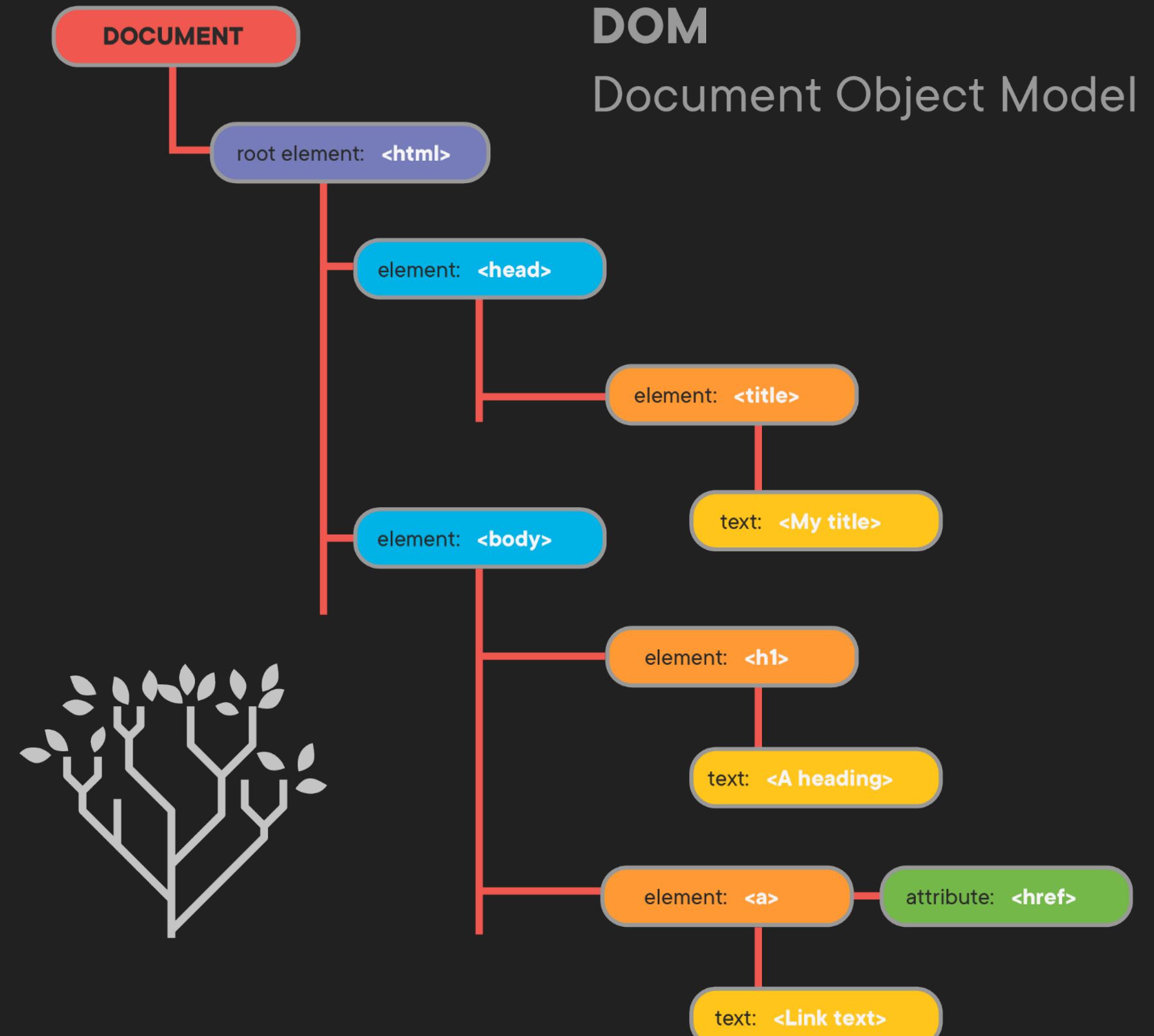
The screenshot shows a browser window titled "Module 2" displaying a simple HTML form. The page content is as follows:

```
index.html — Desktop  
index.html X  
body > main > section > form > input  
3     </head>  
4     <body>  
5         <h1>Form elements</h1>  
6         <main>  
7             <section>  
8                 <form>  
9                     <p>Name:</p>  
10                    <input type="text">  
11                    <p>Email:</p>  
12                    <input type="email">  
13                </form>  
14            </section>  
15        </main>  
16    </body>  
17 </html>
```

The browser interface includes tabs for "index.html" and "Desktop", and a status bar at the bottom.

HTML STRUCTURE

- <!DOCTYPE html>: This is required, doctype were meant to act as links to a set of rules, that a HTML page had to follow to be considered good HTML
- <html></html>: This element wraps all content on the entire page, often referred to as the “root” element
- <head></head>: This element acts as a container for all the content you want to include on the HTML page, the content that is not shown to your viewers. This includes “keywords”, “descriptions” and CSS style (more on that later)
- <meta charset=“utf-8”>: This element sets the character set your document should use
- <title></title>: This element set the title of your page. This title appears in the browser tab the page is loaded in
- <body></body>: This contains all the content you want to show to web users



DOM

Document Object Model

HEAD

Inside the `<head>` tags contains information processed by the server, this metadata describes the document to the server

`<head>`

`<! - - Important metadata here - - >`

`<! - - title element here - - >`

`</head>`

```
index.html x
index.html > html > body > footer > p
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <meta charset="UTF-8" />
5      <meta
6        http-equiv="X-UA-Compatible"
7        content="IE=edge" />
8      <meta name="viewport"
9        content="width=device-width,
10       , initial-scale=1.0" />
11      <title>Module 2</title>
12    </head>
13    <body>
14      <h1>Footer elements</h1>
15      <main>
16        <section>
17          <h1>My Blog</h1>
18          <p>
19            Lorem, ipsum dolor
20            sit amet consectetur
21            adipisicing elit.
22            Dolorum
23            culpa pariatur vero
24            vel dolore sequi,
25            non eligendi autem
26            dignissimos
27            explicabo officiis
28            rem aliquam maxime
29            deleniti iure error
30            itaque ipsa.
31            Unde.
32          </p>
33        </section>
34      </main>
35      <footer>
36        <p>&copy; Ryan Collins
37        2022</p>
38      </footer>
```

Footer elements

My Blog

Lore, ipsum dolor sit amet consectetur adipisicing elit. Dolorum culpa pariatur vero vel dolore sequi, non eligendi autem dignissimos explicabo officiis rem aliquam maxime deleniti iure error itaque ipsa. Unde.

© Ryan Collins
2022

```
index.html x
index.html > html > body > h1
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <meta charset="UTF-8" />
5      <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6      <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7      <title>Module 2</title>
8    </head>
9    <body>
10      <h1>Footer elements</h1> == $0
11      <main>...</main>
12      <footer>
13        <p>© Ryan Collins 2022</p>
14      </footer>
15      <!-- Code injected by live-server -->
16      <script type="text/javascript"> ...</script>
17    </body>
18  </html>
```

html body h1

Styles Computed Layout >

Filter :hover .cls +, □

element.style { }

FOOTER

The footer element is located at the bottom of the HTML document

A footer usually contains information like copyrights, and or links, social media icons



```
<footer>
```

```
    <p>&copy; 2022 Ryan Collins</p>
```

```
</footer>
```

```
index.html — Desktop
index.html ×
index.html > html > body > footer > p
9  <body>
10 <h1>Footer elements</h1>
11 <main>
12   <section>
13     <h1>My Blog</h1>
14     <p>
15       Lorem, ipsum dolor
16       sit amet consectetur
17       adipisicing elit.
18       Dolorum
19       culpa pariatur vero
20       vel dolore sequi,
21       non eligendi autem
22       dignissimos
23       explicabo officiis
24       rem aliquam maxime
25       deleniti iure error
26       itaque ipsa.
27       Unde.
28     </p>
29   </section>
30 </main>
31 <footer>
32   <p>&copy; Ryan Collins
33   2022</p>
34 </footer>
35 </body>
36 </html>
```

Footer elements

My Blog

Lorem, ipsum dolor sit amet consectetur adipisicing elit. Dolorum culpa pariatur vero vel dolore sequi, non eligendi autem dignissimos explicabo officiis rem aliquam maxime deleniti iure error itaque ipsa. Un

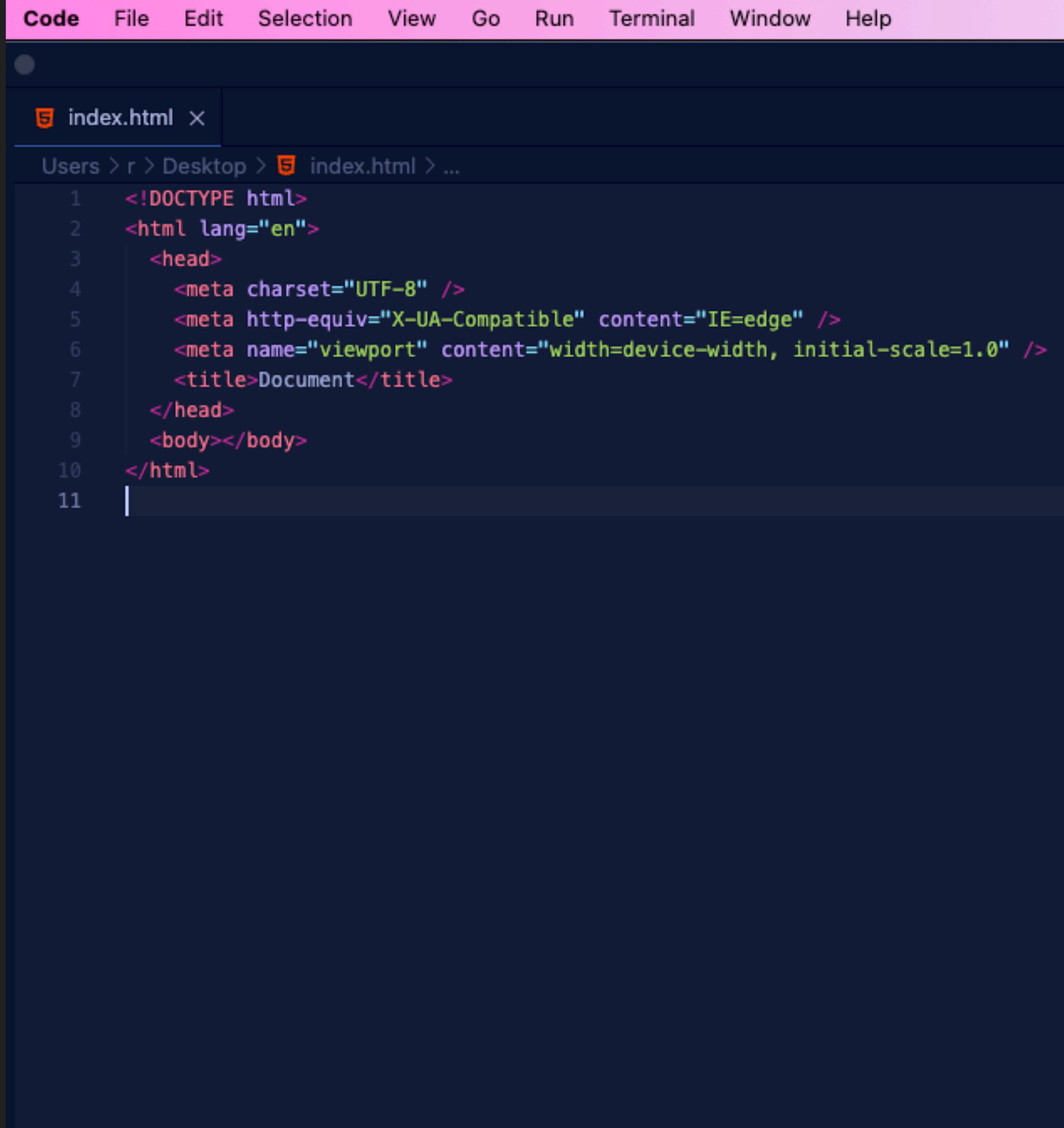
© Ryan Collins 2022

BOILERPLATE

A boilerplate is the basic outline of our document, and how the HTML should be structured for each HTML page.

We can see a few defined and required attributes, for example the <!DOCTYPE html> this tells the browser the version of HTML

Most of your projects will start with a simple boilerplate



The image shows a screenshot of a code editor window titled "index.html". The menu bar includes "Code", "File", "Edit", "Selection", "View", "Go", "Run", "Terminal", "Window", and "Help". The file path "Users > r > Desktop > index.html" is visible. The code editor displays the following HTML boilerplate:

```
1  <!DOCTYPE html>
2  <html lang="en">
3      <head>
4          <meta charset="UTF-8" />
5          <meta http-equiv="X-UA-Compatible" content="IE=edge" />
6          <meta name="viewport" content="width=device-width, initial-scale=1.0" />
7          <title>Document</title>
8      </head>
9      <body></body>
10     </html>
11 |
```

YOUR PROJECT



<https://www.>

PROJECT

By the end of this course, you should be able to
make your own blog or static HTML site
So let's get started on your first website!

Q&A